

6. Multiple Risk Factor Intervention Trial Research Group: Multiple risk factor intervention trial—Risk factor changes and mortality results. *JAMA* 1982 Sep 24; 248:1465-1478

7. Kirkendall WM, Hammond JJ: Hypertension in the elderly. *Arch Intern Med* 1980 Sep; 140:1155-1161

8. The 1984 report of the Joint National Committee on Detection, Evaluation and Treatment of High Blood Pressure. *Arch Intern Med* 1984 May; 144:1045-1057

Patient Compliance in Drug Therapy for Hypertension

TO THE EDITOR: I am writing in regard to Dr G. N. Aagaard's article on drug therapy for hypertension.¹

I fully agree it is dangerous to lower blood pressure abruptly, indiscriminately or erratically—especially the latter. Patients who do not accept the idea that blood pressure medication is an on-time-as-directed type of therapy should not be treated. Physicians who will not keep calendar count of refills should not treat hypertension.

The only study that reflects this thinking is the HDFP (Hypertension Detection and Follow-up Program). But the journal's article misses the reason for the different mortality rates in the HDFP study. The author theorizes, "It is possible that the strong psychological and social support given the SC [stepped care] subjects over the five-year study caused the reduction in mortality." The difference between the stepped care and referred care subjects was *compliance*. In this study, compliance was drummed into those patients in the stepped care group only.

The findings I have most faith in are from the combined insurance company study of 20,000 deceased hypertensive patients who were under treatment at the time of death, evaluated from an actuarial point of view. This study came up with the conclusion that the lower the blood pressure, the longer the life span. It did not deal with lowering the blood pressure per se unless the insured died while the pressure was being lowered.

To get the mortality down to 2% to 4% greater than non-motensive insured men, the systolic pressure had to be reduced to 137 mm of mercury or less and the diastolic to 73 mm of mercury or less. Curiously, when these two numbers are added together, they total 210 or 2° less than the boiling point of water at sea level in degrees Fahrenheit. This coincidence makes it easy for patients to remember.

ROBERT HAWKINS, MD
206 West Anapamu
Santa Barbara, CA 93101

REFERENCE

1. Aagaard GN: Hypertension—Indications, goals and potential risks of drug therapy. *West J Med* 1984 Oct; 141:476-480

Presumed Chlamydial Infections and Treatment of Sexual Partners

TO THE EDITOR: In his discussion of *Chlamydia trachomatis* infections,¹ Martin Quan does a good job of summarizing the clinical features, varied presentations and high incidence. He points out that many practicing physicians, due to the expense and trouble of culturing for *Chlamydia*, will treat presumed chlamydial infections empirically. I thoroughly agree with this. However, he does not touch on an important corollary which is that sexual partners likewise should be treated.

This particular aspect of treating sexually transmitted diseases continues to be a matter of frustration for me.

Often, partners of my patients will see another physician who, after a gonorrhea culture is done and found to be negative, will tell that patient that he or she has no sexually transmitted disease. I feel that treating sexual partners is very important and the above scenario makes both the other physician and myself look foolish. I believe that we physicians should be consistent in treating sexual partners of persons presumably infected with *Chlamydia*.

EDWARD C. SARGENT, MD
1110 Fairfield Ave
Eugene, OR 97402

REFERENCE

1. Quan M: *Chlamydia trachomatis* infections. In *Epitomes of progress—General and family practice*. *West J Med* 1984 Sep; 141:364

Skin Testing During Pregnancy

TO THE EDITOR: This letter is in response to the epitome "The Radioallergosorbent Test" in the October 1984 issue.

The authors state, "it is generally agreed that skin testing is contraindicated during pregnancy and that RAST [radioallergosorbent test] is an acceptable alternative."

I disagree with this statement. It has been shown in several studies that in general immunotherapy is not contraindicated during pregnancy. Skin tests, if properly performed using scratch or puncture prior to an intradermal test and using the forearms versus the back, run a much smaller risk than immunotherapy; therefore, I do not feel they are contraindicated during pregnancy. It is assumed that an informed consent form has been carefully reviewed with the patient and that medication and equipment are available in case a reaction does occur.

Other than for the possible medical-legal aspects if a reaction does occur, I would be interested in hearing if the authors know of any medical contraindication to the testing during pregnancy.

JULIAN L. HARWELL, MD
960 East Green Street
Pasadena, CA 91106

REFERENCE

1. Asser S, Hamburger RN: The radioallergosorbent test. In *Allergy—Important advances in clinical medicine (Epitomes of Progress)*. *West J Med* 1984 Oct; 141:511

* * *

Drs Asser and Hamburger Reply

TO THE EDITOR: We know of no medical or biologic contraindication to skin testing during pregnancy. The reasons for that statement in our epitome are the following:

1. Most allergists will not begin immunotherapy injections during pregnancy and therefore postpone skin testing. If a pregnant patient's history suggests that her illness is due to environmental allergens that could be removed with benefit to the patient, the RAST is preferred for confirmation of the clinical impression.

2. Skin testing or immunotherapy injections with their attendant risks of anaphylactic or psychalgic reactions (or both) followed by abortion, miscarriage or the birth of a malformed infant add unnecessary malpractice risk to the practice of allergy.

The precautions Dr Harwell outlines in his letter are those generally applicable to all allergy patients but would not be adequate during pregnancy. We therefore believe

that the risk-benefit ratio is not favorable to skin testing or beginning immunotherapy injections during pregnancy. Continuing immunotherapy, when a stable safe dosage regimen has been established, is generally accepted during pregnancy.

SETH ASSER, MD

Fellow, Pediatric Immunology and Allergy Division

ROBERT N. HAMBURGER, MD

*Professor of Pediatrics
Head, Pediatric Immunology and Allergy Division*

*University of California, San Diego
La Jolla, CA 92093*

Recovery of Radiolabeled-Insulin From Parenteral Nutrient Solutions

TO THE EDITOR: With the availability of essential amino acids for parenteral use, an increasing number of patients are receiving total parenteral nutrition. Frequently, these patients need exogenous insulin. This can be given either by a bolus injection or the insulin can be added to the parenteral nutrition fluid and given by infusion. Adsorption of insulin to solid surfaces was first described in 1951.¹ Only a few studies have been done examining the availability of insulin from parenteral nutrient solutions (PNS).^{2,3} We did not find published studies examining the recovery of insulin from PNS with use of a silastic (Hickman-Evermed) catheter. So we decided to examine this under frequently encountered clinical conditions.

Methods

Twenty units of regular insulin were added to 1,000 ml of PNS (500 ml D5OW + 500 ml 8.5% amino acid solution—Travenol). Five microcuries of insulin I 125 were added to the bottle. The bottle was shaken and five 1-ml aliquots were removed directly from the bottle. Polyvinyl tubing was connected to the bottle and the solution was run at a rate of 50 ml per hour; 1-ml aliquots of the first 100 ml of effluent were collected at the end of the tubing. These aliquots and the aliquots obtained directly from the PNS bottle were counted in a gamma counter for one minute.

Radioactivity of the consecutive 1-ml aliquots collected at the end of the tubing was compared with the radioactivity of

the aliquots obtained directly from the bottle (taken as 100%). Percent recovery was calculated for each consecutive milliliter and plotted on a graph by computer. Similar experiments were done with 5% dextrose in water (with polyvinyl chloride tubing) and a silastic catheter (with PNS).

Results

Recovery of the radioactivity with PNS averaged 78% by the 20th ml, gradually rising thereafter. Recovery was slightly higher with PNS than with 5% dextrose in water (Figure 1). Recovery with polyvinyl chloride tubing and silastic catheter was similar.

With common infusion rates (50 to 100 ml per hour), more than 75% recovery with a virtual plateau can be achieved in less than 20 minutes. A 50-ml washout of the infusion system to increase the recovery of insulin at the beginning of the infusion has been recommended.⁴ Recovery of more than 75% of insulin within a short period of starting the infusion makes it unlikely that washout of the infusion system is critical. The expense of such a washout may be significant with these costly solutions. The use of an in-line filter significantly reduces early recovery, but it plateaus by the 20th ml as well. Absolute recovery was not measured in this study; however, the relative consistency of insulin delivery remains an important observation.*

SUNITA C. BAXI, MD

*Whittier Institute for Diabetes and Endocrinology
La Jolla, California*

GEORGE E. DAILEY III, MD

*Head, Division of Diabetes and Endocrinology
Scripps Clinic and Research Foundation
10666 N Torrey Pines Road
La Jolla, CA 92037*

REFERENCES

1. Ferrebee JW, Johnson BB, Mithoefer JC, et al: Insulin and adrenocorticotropin labeled with radioiodine. *Endocrinology* 1951; 48:277-283
2. Weber SS, Wood WA, Jackson EA: Availability of insulin from parenteral nutrient solutions. *Am J Hosp Pharm* 1977; 34:353-357
3. Tate JT, Cowan GSM: Insulin kinetics in hyperalimentation solution and routine intravenous therapy. *Am Surg* 1977 Dec; 43:811-816
4. Peterson L, Caldwell JMT, Hoffman J: Insulin adsorbance to polyvinylchloride surfaces with implications for constant-infusion therapy. *Diabetes* 1976 Jan; 25:72-74

*This study was supported by Travenol Laboratories. The work was accepted for inclusion in the 1982 scientific section of the American Diabetes Association meeting.

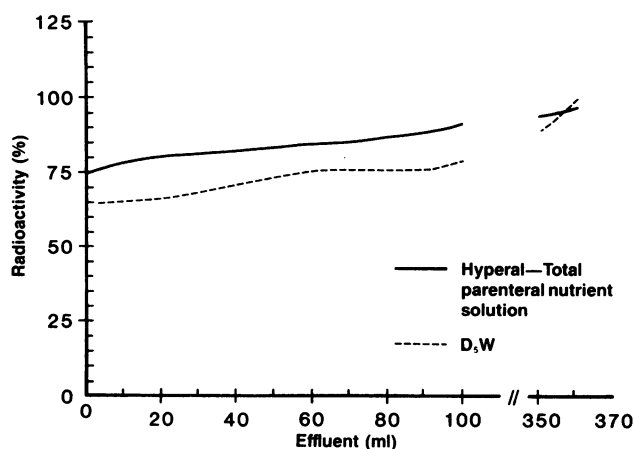


Figure 1.—Comparison of recovery of radiolabeled insulin from D5W versus parenteral nutrient solution.

Premarital Screening for Syphilis

TO THE EDITOR: I wish that I could agree with Dr Haskell's recent analysis showing that premarital screening of women for syphilis is not cost-effective.¹ If Dr Haskell's arguments are correct, then we could eliminate premarital blood testing for women entirely. The other test required premaritally—a rubella titre—has been shown to be highly insensitive (many false-negatives).² Furthermore, since the new rubella vaccine is highly effective^{3,4} and now considered safe even for pregnant women,⁴ then all we need in regard to rubella is certification of vaccination and we can be sure that our purpose in reducing chances of congenital rubella has been adequately met.

However, one of the assumptions inherent in Dr Haskell's article is a \$20 office visit for each woman at a cost totaling six million dollars per annum. Since the VDRL is a screening test, a physician examination is quite simply unnecessary (and in fact is not required for men). What if the law were changed